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**Newberry et al.**

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(54) **SYSTEM AND METHOD FOR A DRUG DELIVERY AND BIOSENSOR PATCH**

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(58) **Field of Classification Search**

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(57) **ABSTRACT**

An integrated drug delivery and biosensor (IDDB) system is implemented on a patch or arm band. The drug delivery system includes needles adapted to pierce the skin and direct injection of a predetermined dosage of medication through the needles into the epidermis of the skin of a patient. The integrated biosensor monitors absorption of the medication into the epidermis of the skin of the patient and may also monitor concentration of the medication or other relevant substances in arterial blood flow of the patient. The integrated biosensor may also monitor a patient's vitals in response to the medication. The integrated biosensor may then alter dosage or frequency of administration of dosages or even halt a dosage of medication in response to the patient's vitals or absorption of the medication.

**23 Claims, 18 Drawing Sheets**

